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HEWLETT-PACKARD COMPANY
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EXAMINER

YE, LIN

| ART UNIT | PAPER NUMBER |
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2615

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/086,342 | Applicant(s) ROBINS ET AL. | |
| | Examiner Lin Ye | Art Unit 2615 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6-10 and 12-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Amir et al. U.S. Patent 6,539,100.

Referring to claim 1, the Amir reference discloses in Figures 1-3, a method for capturing an image (e.g., output device 108 comprises a photographic camera, see Col. 4, lines 64-65), comprising the steps of: determining that an image preview includes at least one face (e.g., analyzing features of a scene 112 and automatically determining pupils or faces in the scene, see Col. 6, lines 53-56 and Col.3, lines 27-47); determining an amount of sclera in the face (e.g., number of detected pupils, see col. 5, lines 5-13); retrieving a sclera setting (See a program executed in Figure 3); and capturing the image when the determined amount of sclera is at least equal to the sclera setting (e.g., the picture is taken when all subject's eyes are open determined by computer 102 by comparing the number of detected pupils whether equals the number of known pupils ,see Col. 5, lines 10-22; it should be noted that the Amir reference discloses using various methods to associate eyes in a scene with subjects as a

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sclera setting , such as described in Figure 9 of U.S. patent No. 5,016,282, see Col. 1, lines 58-67 and Col. 6, lines 58-67, such observed for difference in intensity of light reflected from Iris and Sclera; or skin color adjacent to each pupil described in the U.S. Patent No. 5,430,809, see Col. 8, lines 35-40).

Referring to claim 2, the Amir reference discloses further comprising the steps of: specifying the sclera setting (e.g., such number of known pupils); and storing the sclera setting in a memory (e.g., storage 120, as well as RAM 122 used to store the programming instructions such comparing the pupil candidate to certain model specifications, such as certain expected size, shape, color and shape of the region surrounding the pupil as the sclera, see Col. 7, lines 31-38).

Referring to claim 3, the Amir reference discloses wherein the step of retrieving the sclera setting further comprises the step of retrieving a default sclera setting (e.g., the default sclera setting as comparing the number of detected pupils equals the number of known pupils).

Referring to claim 4, the Amir reference discloses further comprising the step of arming a white eye portraiture program (various program stored in computer 102 for analyzing a scene and deterring which pupils correspond to which subjects) such that the steps of determining, retrieving and capturing is performed only when the white eye portraiture program is armed (in the computer 102, See Col. 5, lines 1-15).

Referring to claim 6, the Amir reference discloses in Figures 1-3, a system (100) for capturing digital images, comprising: a photosensor (a digital video camera 104, see Col. 4, lines 24-30) configured to detect an image; a memory (RAM 122 inside of computer 102)

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configured to store at least a sclera setting; a processor configured to determine when at least one face is present in the detected image (See col. 6, lines 54-56), and further configured to determine an amount of sclera present in the face so that the determined amount of sclera is compared to the sclera setting; and an actuator configured to initiate capture of the detected image such that the detected image is captured when the determined amount of sclera is at least equal to the sclera setting (e.g., the picture is taken when all subject's eyes are open determined by computer 102 by comparing the number of detected pupils whether equals the number of known pupils, see Col. 5, lines 5-22; it should be noted that the Amir reference discloses using various methods to associate eyes in a scene with subjects as a sclera setting, such as described in Figure 9 of U.S. patent No. 5,016,282, see Col. 1, lines 58-67 and Col. 6, lines 58-67, such observed for difference in intensity of light reflected from Iris and Sclera; or skin color adjacent to each pupil described in the U.S. Patent No. 5,430,809, see Col. 8, lines 35-40).

Referring to claim 7, the Amir reference discloses a sclera specifying device (e.g., a indicator wheel, switch, dial or menu shown on a display screen, etc., see Col. 5, lines 1-5) such that the sclera setting is specified through the sclera specifying device.

Referring to claim 8, the Amir reference discloses wherein the sclera setting specified by the sclera specifying device is stored in the memory (RAM 122, see Col. 5, lines 25-38).

Referring to claim 9, the Amir reference discloses wherein the sclera setting is detected from the sclera specifying device (See Col. 4, lines 64-67 and Col. 5, lines 1-5).

Referring to claim 10, the Amir reference discloses a predefined sclera setting (e.g., number of pupils in the scene) such that the sclera setting is specified by the predefined sclera setting (See Col. 4, lines 64-67 and Col. 5, lines 1-5).

Referring to claim 12, the Amir reference discloses an arming controller (a processor 118, see Col. 5, lines 24-25) configured to arm a white eye portraiture program such that the image is captured only when the white eye portraiture program is armed (e.g., avoids taking the picture until all subjects' eyes are open, see Col. 5, lines 1-14).

Referring to claim 13, the Amir reference discloses display screen and a menu program such that the arming controller is armed by executing the menu program (See Col. 5, lines 2-3).

Referring to claim 14, the Amir reference discloses wherein the arming controller comprises a control button such that the arming controller is armed by actuating the control button (See Col. 5, lines 1-3).

Referring to claim 15, the Amir reference discloses wherein the arming controller comprises a sclera specifying device such that the arming controller is armed by actuating the sclera specifying device and such that the sclera setting is specified according to a setting of the sclera specifying device (See Col. 5, lines 1-14).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amir et al. U.S. Patent 6,539,100 in view of Davida et al. U.S. Publication 2002/0070844.

Referring to claim 5, the Amir reference discloses all subject matter as discussed with respect to claim 1, except that Amir reference does not explicitly show the amount of sclera is expressed as a percentage of sclera expected in the face.

The Davida reference teaches a Iris scan technology method for identifying a eye of human; and measuring a percentage of the distance between the circular pupillary boundary and the circular boundary between the iris and sclera (See page 3, [0043]). The Davida reference is evidence that one of ordinary skill in the art at the time to see more advantages the computer system determining a percentage of sclera expected in the face as to associate pupils in a scene with subjects so that it can accurately determine which pupils correspond to which subject. For that reason, it would have been obvious to one of ordinary skill in the art to modify the system of Amir ('100) by providing the amount of sclera is expressed as a percentage of sclera expected in the face as taught by Davida ('844).

Referring to claim 11, the Amir and Davida references disclose all subject matter as discussed with respect to same comments to claims 5 and 6.

5. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amir et al. U.S. Patent 6,539,100.

Referring to claim 16, the Amir reference discloses in Figures 1-3, a program for increasing an amount of visible sclera in a captured image, the program being stored as a

computer readable medium (RAM 122 in the computer 102), the program comprising: logic configured to arm the program; logic configured to determine whether a preview image includes at least one face (See Col. 6, lines 53-57); logic configured to determine whether the preview image includes an amount of sclera (amount pupils determined from sclera and iris of eye);, such that the image is captured when the preview image includes the face and the preview image includes the amount of sclera, and such that the image is not captured when the preview image includes the face and does not include the amount of sclera (e.g., avoids taking the picture until all subjects' eyes are open, see Col. 5, lines 1-14).

The Amir reference does not explicitly state such that an image is captured when the preview image does not include the face. Official Notice is taken that both the concept and the advantages of providing an image is captured when the preview image does not include the face are well known and expected in the art. It would have been obvious to capture an image when the preview image does not include the face in Amir ('100) as this logic is known to offer a normal standard camera operation, because no subjects' eyes in the scene.

Referring to claim 17, the Amir reference discloses logic configured to receive a sclera setting (from wheel, switch, buttons or menu shown on a display screen); and logic configured to determine whether the preview image includes the amount of sclera at least equal to the sclera setting, such that the image is captured when the amount of sclera is at least equal to the sclera setting (e.g., until the number of detected pupils equals the number of known pupils, in this way, the photographic camera ensures the picture is taken when all subjects' eyes are open, See Col. 5, lines 1-14).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Tomono et al. U.S 5,016,282 discloses characteristic features of images of an object eye are extracted to enable non-contact detection of eye movement.
 - b. Tajima et al. U.S. 6,928,231 discloses a method and system for video recording in which scenes desired by a user can be recorded.
 - c. Suzaki et al. U.S. 6,307,954 discloses an eye image recognition method for extracting a region of a pupil of an eye from a captured image.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Ye whose telephone number is (571) 272-7372. The examiner can normally be reached on Mon-Fri 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Lin Ye', with a stylized, flowing script.

Lin Ye
Examiner
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August 29, 2005